

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

Claims 1-8 (canceled).

Claim 9 (currently amended): The temperature-compensated piezoelectric oscillator according to Claim ~~8~~13, wherein each of the first and second voltage generation circuits includes at least one thermo-sensitive element and a plurality of resistance elements.

Claim 10 (currently amended): The temperature-compensated piezoelectric oscillator according to Claim ~~8~~13, wherein each of the first and second voltage generation circuits includes a parallel circuit connected to a terminal of the temperature-compensated piezoelectric oscillator and includes a first thermo-sensitive element and a first resistance element, a second thermo-sensitive element and a second resistance element connected in series to said parallel circuit, one end of said second thermo-sensitive element being grounded.

Claim 11 (currently amended): The temperature-compensated piezoelectric oscillator according to Claim ~~8~~13, wherein each of the first and second voltage generation circuits includes a thermo-sensitive element and a first resistance element connected in parallel to define a parallel circuit and a second resistance element connected in series to the parallel circuit.

Claim 12 (previously presented): The temperature-compensated piezoelectric oscillator according to Claim 9, wherein the thermo-sensitive element is a thermistor.

Claim 13 (currently amended): ~~The temperature-compensated piezoelectric oscillator according to Claim 8, further comprising:~~ A temperature-compensated piezoelectric oscillator comprising:

a piezoelectric element;

an amplifying circuit connected to a first end of the piezoelectric element;

a variable capacitance element connected a second end of the piezoelectric element;

a compensation voltage generation circuit for applying a voltage corresponding to a temperature to the variable capacitance element; and

a temperature compensation data generation circuit for detecting the ambient temperature and for generating temperature compensation data corresponding to the detected temperature; wherein

the compensation voltage generation circuit includes a first voltage generation circuit for applying to a first end of the variable capacitance element a first voltage that is variable depending on an ambient temperature and second voltage generation circuit for applying to a second end of the variable capacitance element a second voltage that is variable depending on the ambient temperature in a direction opposite to the first voltage; and

each of the first and second voltage generation circuits includes a DA converter arranged to convert the temperature compensation data in a digital format into an analog signal.

Claim 14 (currently amended): The temperature-compensated piezoelectric oscillator according to Claim ~~8~~13, wherein the piezoelectric element is an AT-cut quartz crystal resonator.

Claim 15 (currently amended): The temperature-compensated piezoelectric

oscillator according to Claim ~~8~~13, wherein the variable capacitance element is a varactor diode.

Claim 16 (currently amended): ~~The temperature-compensated piezoelectric oscillator according to Claim 15, wherein~~ A temperature-compensated piezoelectric oscillator comprising:

a piezoelectric element;  
an amplifying circuit connected to a first end of the piezoelectric element;  
a variable capacitance element connected a second end of the piezoelectric element; and  
a compensation voltage generation circuit for applying a voltage corresponding to a temperature to the variable capacitance element; wherein  
the compensation voltage generation circuit includes a first voltage generation circuit for applying to a first end of the variable capacitance element a first voltage that is variable depending on an ambient temperature and second voltage generation circuit for applying to a second end of the variable capacitance element a second voltage that is variable depending on the ambient temperature in a direction opposite to the first voltage;  
the variable capacitance element is a varactor diode; and  
an anode of the varactor diode is connected to the piezoelectric element and a cathode of the varactor diode is grounded via a high-frequency bypass capacitor.

Claim 17 (currently amended): ~~The temperature-compensated piezoelectric oscillator according to Claim 8, wherein~~ A temperature-compensated piezoelectric oscillator comprising:

a piezoelectric element;  
an amplifying circuit connected to a first end of the piezoelectric element;  
a variable capacitance element connected a second end of the piezoelectric

element; and

a compensation voltage generation circuit for applying a voltage corresponding to a temperature to the variable capacitance element; wherein

the compensation voltage generation circuit includes a first voltage generation circuit for applying to a first end of the variable capacitance element a first voltage that is variable depending on an ambient temperature and second voltage generation circuit for applying to a second end of the variable capacitance element a second voltage that is variable depending on the ambient temperature in a direction opposite to the first voltage; and

the amplifying circuit includes an NPN transistor, a plurality of resistors and at least one capacitor.

Claim 18 (previously presented): The temperature-compensated piezoelectric oscillator according to Claim 17, wherein a base of the NPN transistor is connected to the piezoelectric element, a collector of the NPN transistor is connected a terminal of the temperature-compensated piezoelectric oscillator via one of the plurality of resistors, and an emitter of the NPN transistor is grounded via another of the plurality of resistors and the at least one capacitor.

Claim 19 (currently amended): An electronic apparatus comprising the temperature-compensated piezoelectric oscillator as set forth in Claim 813.

Claim 20 (currently amended): ~~The~~ An electronic apparatus ~~according to claim 19, further comprising:~~

a temperature-compensated piezoelectric oscillator comprising:

a piezoelectric element;

an amplifying circuit connected to a first end of the piezoelectric element;

a variable capacitance element connected a second end of the

piezoelectric element; and

a compensation voltage generation circuit for applying a voltage corresponding to a temperature to the variable capacitance element; wherein the compensation voltage generation circuit includes a first voltage generation circuit for applying to a first end of the variable capacitance element a first voltage that is variable depending on an ambient temperature and second voltage generation circuit for applying to a second end of the variable capacitance element a second voltage that is variable depending on the ambient temperature in a direction opposite to the first voltage;

an antenna;  
a duplexer connected to the antenna;  
a plurality of amplifiers connected to the duplexer;  
a plurality of mixers, each being connected to a respective one of the plurality of amplifiers;  
a voltage control oscillator connected to said plurality of mixers; and  
a PLL circuit and a low pass filter connected to the voltage control oscillator;  
wherein

said temperature-compensated piezoelectric oscillator is connected to said the voltage control oscillator.

Claim 21 (new): The temperature-compensated piezoelectric oscillator according to Claim 16, wherein each of the first and second voltage generation circuits includes at least one thermo-sensitive element and a plurality of resistance elements.

Claim 22 (new): The temperature-compensated piezoelectric oscillator according to Claim 16, wherein each of the first and second voltage generation circuits includes a parallel circuit connected to a terminal of the temperature-compensated piezoelectric oscillator and includes a first thermo-sensitive element and a first resistance element, a

second thermo-sensitive element and a second resistance element connected in series to said parallel circuit, one end of said second thermo-sensitive element being grounded.

Claim 23 (new): The temperature-compensated piezoelectric oscillator according to Claim 16, wherein each of the first and second voltage generation circuits includes a thermo-sensitive element and a first resistance element connected in parallel to define a parallel circuit and a second resistance element connected in series to the parallel circuit.

Claim 24 (new): The temperature-compensated piezoelectric oscillator according to Claim 23, wherein the thermo-sensitive element is a thermistor.

Claim 25 (new): The temperature-compensated piezoelectric oscillator according to Claim 16, wherein the piezoelectric element is an AT-cut quartz crystal resonator.

Claim 26 (new): The temperature-compensated piezoelectric oscillator according to Claim 17, wherein each of the first and second voltage generation circuits includes at least one thermo-sensitive element and a plurality of resistance elements.

Claim 27 (new): The temperature-compensated piezoelectric oscillator according to Claim 17, wherein each of the first and second voltage generation circuits includes a parallel circuit connected to a terminal of the temperature-compensated piezoelectric oscillator and includes a first thermo-sensitive element and a first resistance element, a second thermo-sensitive element and a second resistance element connected in series to said parallel circuit, one end of said second thermo-sensitive element being grounded.

Claim 28 (new): The temperature-compensated piezoelectric oscillator according to Claim 17, wherein each of the first and second voltage generation circuits includes a thermo-sensitive element and a first resistance element connected in parallel to define a parallel circuit and a second resistance element connected in series to the parallel circuit.

Claim 29 (new): The temperature-compensated piezoelectric oscillator according to Claim 28, wherein the thermo-sensitive element is a thermistor.

Claim 30 (new): The temperature-compensated piezoelectric oscillator according to Claim 17, wherein the piezoelectric element is an AT-cut quartz crystal resonator.

Claim 31 (new): The temperature-compensated piezoelectric oscillator according to Claim 17, wherein the variable capacitance element is a varactor diode.